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A.D. 1898. JUNE 20. Nº. 13,673.

POWELL'S COMPLETE SPECIFICATION.

(1 SHEET)

FIG. 1.

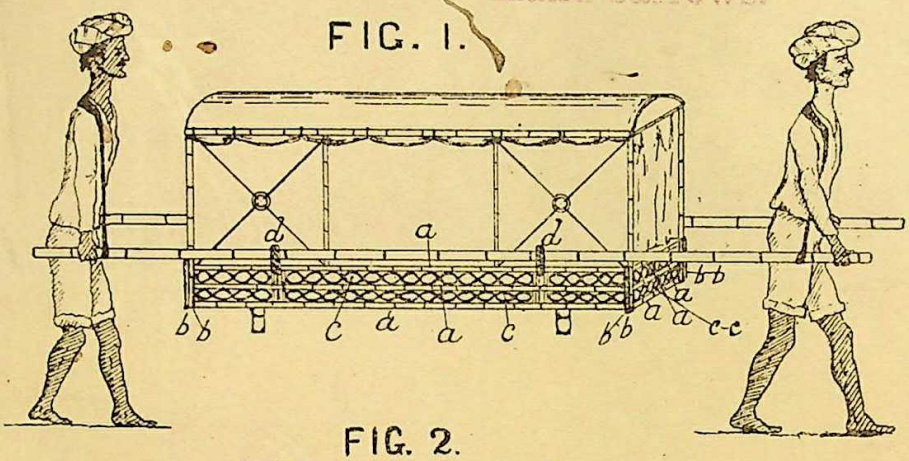
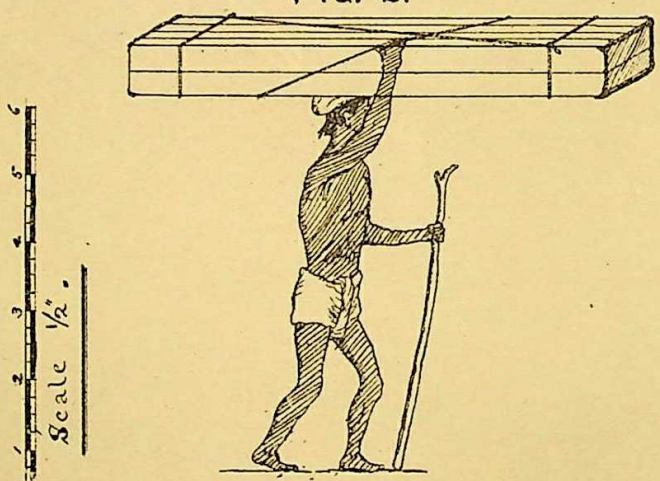


FIG. 2.



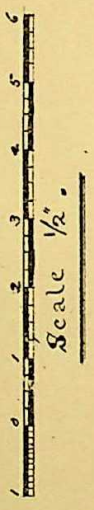


FIG. 3.

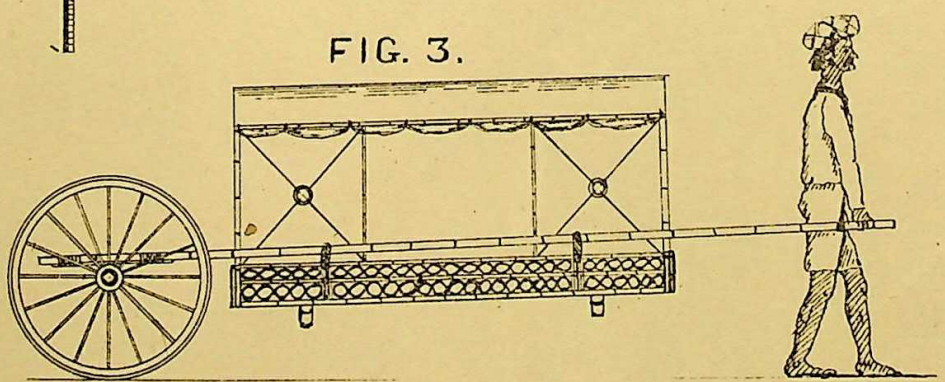


FIG. 4.

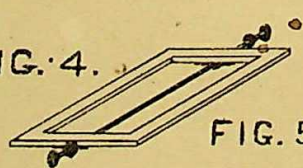
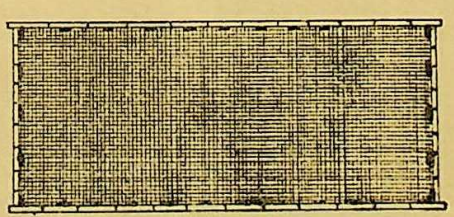


FIG. 5.



[This Drawing is a reproduction of the Original on a reduced scale.]

Malby & Sons, Photo-Litho

01 CARRIAGES & WAGONS.
Hand-barrows.

N° 13,673 A.D. 1898

Date of Application, 20th June, 1898
Complete Specification Left, 23rd Feb., 1899—Accepted, 29th Apr., 1899

DUPLICATE

PROVISIONAL SPECIFICATION.

Improved Rattan Cane, Bamboo, or Basket-work Vehicles, Wheeled and Portable, including Indian Doolies, Toujons, Ambulances, Vehicles for Army or Hospital Work and Transport of Sick, Wounded, Passengers, or others.

I, CHARLES POWELL, Indian Civil Service, Madras, Retired Pensioner, of 75, Wiltshire Road, Brixton, present address, c/o Messrs. Wm. Hutchinson & Coy., Trafalgar Buildings, Charing Cross, W.C., do hereby declare the nature of this invention to be as follows:—

Rattan cane bamboo or basket work vehicles made either entirely of any of the before named materials or of any combination of them or with or without conjunction with any other suitable material such as steel, wire, metal, wood or the like, constructed, so as to be hung by any suitable material as india rubber, rope, hide, leather, metal, rattan, cane or the like, from between their bearings *i.e.* from between the poles or frames for supporting them. To be either propelled or drawn on wheels or to be carried, by men or animals, and constructed with or without the aid of ordinary steel springs or the like for breaking concussion whether arising from the resistance of wheels or from carriage by men or animals.

Dated this 18th day of June 1898.

C. POWELL.

COMPLETE SPECIFICATION.

Improved Rattan Cane, Bamboo, or Basket-work Vehicles, Wheeled and Portable, including Indian Doolies, Toujons, Ambulances, Vehicles for Army or Hospital Work and Transport of Sick, Wounded, Passengers, or others.

I, CHARLES POWELL, Indian Civil Service, Madras, Retired Pensioner, of 75, Wiltshire Road, Brixton, present address, c/o Messrs. Wm. Hutchinson & Coy., Trafalgar Buildings, Charing Cross, W.C., do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

These vehicles can be made of either or any of the materials indicated in the Provisional Specification No. 13673 A.D. 1898 June 20th, alone, or combined and with or without the addition of any other suitable material, also of numerous designs and workmanship according to requirements,—a general description of construction principles and novelty of adaptation of the material and the vehicles

[*Price* 8*d.*]

is therefore given and the way to make a difficult example of the vehicles described in detail, as being the best for demonstration *viz.*: The Indian Army Dooly or Ambulance made to be either a portable or wheeled vehicle and to pack in a bag for any transport. Fig. 1, shows the Indian Army dooly as portable by 2 men. Fig. 2, shows the same packed for carriage on an Indian coolie's head. Fig. 3, (elevation) shows the same on 2 wheels secured at one end to the poles for wheeling by one man. Fig. 4, shows the axle and wooden frame by which 2 wheels are secured to the poles or to the body if required. Fig. 5, shows the stretcher (detachable) to be hung inside the body of dooly on which the occupant lies on a mattress or the like.

General Description.

Portable Vehicles.

A body of the indicated make of any suitable design for the purpose intended is made. For protection from sun or weather the frame for a covering is made of any of the materials indicated bent or otherwise and covered with cloth, mat or any suitable material. The whole or part of this top is made removeable, moveable, folding or fixed and is secured to the body accordingly by string, leather, or other suitable means or by metal or other sockets, clamps, screws or the like or may be formed from parts of the body itself. If to be packed the whole or part of this top is made to fold or pack on or within the body of the vehicle.

Wheeled Vehicles.

Almost any design may be made from a child's perambulator, draft vehicle for horses or other animals, or a tram or rail car, or for any motive power—Various portable vehicles may be converted to wheeled and *vice versa*—*e.g.* A pair or pairs of wheels may be secured to any suitable part of the body by an axle or axles fitted either below, through, above, or at either end of the body, a man between the poles, or 2 men, one at either end run along with it, with the poles in the hands.

A pair of wheels is secured to the poles before or behind the body of the vehicle, a man at the other end with the poles in his hand runs along with it. (Fig. 3.)

The wheels may also be secured by short axles of wood or metal fitted to the sides or poles of the portable vehicles and not made the full length between wheels. Cycle wheels may also be fitted to the poles to be ridden and the vehicle thus propelled, either by a motor or mounted man or men, the saddles being raised on frames secured to the poles in any suitable way. The wheels thus ridden or driven may be of any suitable size, geared or otherwise. In the case of single wheels between the poles a pair of wheels is required to support the body secured to it in any suitable position. Removal of wheels and attachments makes the vehicle portable again.

Packed in a bag or otherwise a portable vehicle is easily placed on wheels in various ways with or without the pole or poles.

The Method of Hanging or Securing the Vehicle so as to Reduce Concussion.

Portable Vehicles.

The pole or poles are long and elastic. The material and make of the vehicle is also elastic. The material and method of using it, for hanging the vehicle, bed, seats or the like is also elastic. The pole or poles are secured to the vehicle in such a position and manner by rope, india rubber, hide leather or the like so as to make the most of their elasticity and that of the vehicle. The stretcher, bed, seat or the like for occupant to lie flat, or recline, or sit on, according to design of vehicle, may be either a permanent part or separate and removable: If the latter it is also hung in the vehicle body by any such indicated material in such a manner as to have free horizontal or vertical play without touching the sides or ends of the vehicle; concussion from any cause is thus reduced or broken before it reaches

the occupant by (1) material, (2) construction, (3) the manner of using or applying them, (4) by hanging the vehicle from or between the pole, poles, wooden or other frames; bearings or supports and (5) generally by making concussion travel as indirectly as possible through elastic material and construction to the occupant.

Wheeled Vehicles.

Concussion in these is broken in the very same way on the same principles. In short it is broken by indirect communication, elastic material, construction, and connection, and by a receptacle which instead of resisting, retires from the shock.

Bodies of various horse or other wheeled vehicles of such material, of almost any design, can be made, as a hansom cab, dog cart, Croydon cart, gig, curricle or the like and hung in the way described from or between a wooden or other frame work to which either a pole for 2 animals or shafts can be added in the ordinary or various ways.

2 or 3 or more of such vehicle bodies to be used in one frame may be made to fit it, to be changed by a groom.

Such a cane, bamboo or basket body or the like, because it is hung between or from the carriage frames and not secured to it by bolts, clamps of metal or the like and because it is so light, can be easily manipulated or placed in any suitable position either on or off the carriage by any intelligent man.

The Army Dooly or Ambulance.

Dimensions: 76 inches long outside;
30 inches wide outside;
7 inches deep outside.

The Ends or Cross Frames. (*a*)

3 bamboos (*a*), about half inch diameter placed level, 2 to 3 inches apart, secured with suitable material at either end by 2 upright pieces of bamboo about 7 inches long. (*b*) Between these one piece of thin cane is worked undulating (*c*) from the inside of one bamboo to the inside of the next and where it touches them, it is secured by suitable material as cane fibre, wire, string, or the like. (Fig. 1.)

The Side or Long Frames.

These are made in the very same way. These 4 frames, short cross ones for ends (*a*) and long ones for sides (*a*) are then fastened together by suitably securing the 8 short uprights (*b*) at either end of each frame together, the cross or end frames being placed inside the side frames. This forms a parallelogram like a long 4 cornered box without bottom or top. To make it retain shape under strain, inside each corner is secured by cane fibre, string, or the like, a piece of whole cane, the ends of which run some distance along the inside of the bamboos of the cross and side frames. The middle of these canes form a curve where they pass the corners of the structure, thus strengthening it in the same way as metal clamps or stays do a wooden frame of similar shape. (Fig. 1.)

The Stretcher or Bed for Occupant. Fig. 5.)

Is made to lie on of any suitable material as bamboo or cane, or both, or a wooden frame with canvas or of various suitable combinations according to requirements for use with or without a mattress. This is hung inside the oblong body or frame by cords, straps or any suitable material, or permanently secured accordingly as required to be removeable or not, or for changing its position for ascent or descent of a hill or stairs.

The Top for Protection from Weather. (Fig. 1.)

Is formed of 4 arched bamboos or canes the ends of which are secured to the

body of the vehicle, 2 at either end and 2 at equal distances from them. 3 long bamboos are placed on the top of these, 1 in the centre and 1 at either side of the arches and firmly tied to each arch where they cross them. Short cross pieces of bamboo or wood are also tied across the end arches. This top frame is now rigid. Over it is placed a light mat, and over that a cloth covering made and fitted to protect the whole vehicle from weather, and to allow the occupant easy ingress and egress.

Attachments for Poles. (Fig. 1.)

Cane or other suitable rings (*d*) are made for the poles to run freely through. These are secured to the side or end bamboos of the frame or body in any suitable position or number required, by cord, leather, cane or other suitable material.

Poles or Pole. (Figs. 1 & 3.)

2 bamboo poles from 10 to 15 feet long of suitable size are run through the rings either inside or outside the arches of the top, and lashed to the rings if necessary by cord or the like. The men at either end, one or two as required, lift the poles and carry by placing them on their shoulders or by grasping them in their hands.

1 pole if used is of similar length and size of bamboo. It is run through the top of the vehicle about 6 inches from the top of the arches in the centre of them, on the short cross pieces of the 2 end arches, or in any suitable central position. This single pole is then secured to the vehicle by means of 2 pair of bamboos. Each pair is placed in any suitable position at the sides or end of vehicles to which each bamboo end of either pair is lashed or secured in any suitable way. The other ends of each of the pairs are crossed and lashed together so as to form a support for the pole under the centre of the top, or in any suitable central position. The body may also be hung by means of rope or other suitable material to the pole instead of bamboos in a similar way, the pole being supported on the short cross pieces of the end arches of the top, of which there may be more than one on each arch.

Weight of the whole vehicle and poles thus about 35 lbs.

Feet or Supports. (Fig. 1)

Of various kinds, wooden, metal, bamboo, or combinations, are fitted to the sides or ends of the vehicle in suitable positions, and tied, bolted, clamped, or otherwise secured in various ways; or the vehicle may be raised from the ground when placed on it sufficiently by short or long tripods of any suitable material, or the like, placed under the pole or poles; or small wheels and axles of any suitable kind attached in any suitable position to the body of the vehicle, or to the stretcher (when used separately) may be substituted for feet and be made removeable or not.

To Pack for Transport. (Fig. 2.)

The bamboo arches and entire top, cover rings and pole attachments and also feet, or the like, are all unfastened, removed and placed on the top of the stretcher or mattress in the centre of the vehicle body into which they all easily fit. They are then all secured there by passing a cord over them from side to side of the vehicle. The whole is then placed in a sack or bag made to fit loosely, the mouth of which laces up and a convenient compact package is thus formed about 78 inches long, 32 broad, and 8 deep.

To Place on Wheels Packed. (Fig. 4.)

A suitable metal or wood axle is clamped or secured to an oblong wood, metal, or bamboo frame or two side pieces of either about 2 feet long, and of sufficient width (about 32 inches) to take the package between a pair of wheels secured to the axle.

This frame or side pieces is secured to the body of the vehicle by cord, or any other suitable way, and the packed vehicle may then be wheeled by one man with or without the pole or poles.

On Wheels Occupied. (Fig. 3.)

The dooly is placed on the axle frame or side pieces (the wheels having been attached) so that the lower bamboos of the body rest exactly on it, in the centre, or any suitable part of the vehicle, which is tied or otherwise secured to the axle frame or side pieces, or the same frame or side pieces may be secured to the poles before or behind the vehicle body, and the axle and wheels then be fixed so that one man at the other end between the poles may wheel the vehicle.

Various modifications of this vehicle can be made on the same principles, and the stretcher may be detached and carried alone by means of the same kind of attachments fitted with a top, feet, or the like, in similar fashion, and also placed on wheels secured to it, or to the poles, for draft or the like.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

Novelty in the construction and adaptation of vehicles made of the material indicated for various purposes and particularly in the method of hanging the bodies from or between the pole, poles, frames, bearings or supports as well as the stretcher, bed, seat, seats or the like in such a way as to break or reduce concussion from any cause without the use of ordinary carriage springs of any kind though these may be used in conjunction if desired.

Dated this Twenty-third day of February 1899.

C. POWELL.

Redhill: Printed for Her Majesty's Stationery Office, by Malcomson & Co., Ltd.—1899.